

Thunberg and the Netherlands, Background and Influence of His Travels

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The Swedish scholar Carl Peter Thunberg (1743–1828) was a pupil of Carl Linnaeus, who was well-known in the Netherlands. In the service of the VOC (Verenigde Oost-Indische Compagnie, Dutch East India Company) Thunberg spent seven years in the Orient. In 1778 he returned to the Netherlands. Scientific societies prospered in those days.¹ In 1752, the *Hollandsche Maatschappij* (Holland Society) was founded as the first learned society in the Low Countries, followed by many others in the last quarter of the Eighteenth Century. They were usually amateur societies while the number of working societies of professional scientists remained limited. In the second half of the Nineteenth Century most of the societies were dissolved again. Only a few learned societies have survived until the present day. Thunberg became a member of five Dutch societies. In this presentation the connections between Thunberg and the Netherlands are described with an analysis how far his membership of these societies was influential for both parties.

Linnaeus

Linnaeus, (1707–1778) three-year stay in the Netherlands (1735–1738) was the start of his impressive scientific career. He took his doctor's degree in Harderwijk and worked in the leading botanical centers of those days, the Botanical Gardens of Amsterdam and Leiden. As physician and curator of the collec-

tions of George Clifford he was employed at the Hartekamp in Heemstede.² Back in Sweden Linnaeus kept up correspondence with his Dutch friends such as Adriaan van Royen in Leiden and Johannes Burman in Amsterdam. Burman's son Nicolaas Laurens studied with Linnaeus in Uppsala in 1760. Linnaeus was a member of the *Zeeuwsch Genootschap van Wetenschappen* (Zealand Society of Sciences).

Thunberg

After Thunberg had finished his studies in 1770 with Linnaeus, he travelled to Paris.³ In Paris Thunberg worked mainly as a physician, and there he made contacts with the botanists in the *Jardin du Roi*, such as Antoine de Jussieu and André Thouin. Mainly with the latter he was to maintain a correspondence.

On his way to France in October 1770, he visited Dutch botanists who received him cordially as a pupil of their friend Linnaeus. In Burman's collection he identified many minerals, insects and plants, mainly grasses and mosses. While ordering larger genera such as *Ixia*, *Erica* and *Aspalathus*, Burman told him that he would do his utmost to arrange a voyage to Surinam or to the Cape of Good Hope. After his half year in Paris, Thunberg returned to Amsterdam towards the end of 1771. Burman had made arrangements for Thunberg to travel to South Africa and the Orient in the service of the Company as a surgeon. It is true that the possibility of a voyage to Japan was

discussed, but “an vero Japonensem Insulam pervestigare poteris, nobis aequae incognitum est” (whether you will really be able to investigate the Island of Japan, we too do not know). The Directors of the Company had to approve of such a journey.⁴ The Hortus Botanicus of Amsterdam, represented by Egbert de Vrij Temminck, and the private garden owners Jean Deutz, Jan van de Poll Pietersz. and David ten Hoven were to receive plant material from Thunberg and they were to pay for it. Also some Swedes such as Linnaeus, Baeck, Bergius and Montin received duplicates. In effect, large sums of money were sent regularly to Thunberg on behalf of the sponsors and the Hortus.⁵ Back in the Netherlands Thunberg received from Ten Hoven 128 golden ducats as a bonus. The Burmans received a share in the collections as well⁶, but no payments by them are known; possibly they received it in gratitude for good offices. Their share was emphatically separate from that of the Hortus. All material was sent to the Hortus to circumvent problems in clearing⁷; there each parcel was opened and its contents divided in the presence of the sponsors.

Thunberg's voyage

Thunberg departed from Texel in December 1771 on the vessel ‘Schoonzicht’. He stayed in South Africa from 16 April 1772 until 2 March 1775. During his sojourn he undertook three extended collecting trips. His stay had a wearisome start. His visit had been prepared from the Netherlands in consultation with Baron van Reede van Oudtshoorn, the intended successor to Governor Rijk Tulbagh, who died on 11 August 1771. But Oudtshoorn died already before Thunberg's arrival. His successor Van Plettenberg⁸ still had to be convinced of the importance of Thunberg's mission. Van Plettenberg proposed Thunberg to make a voyage to Madagascar, but Thunberg preferred to travel farther East. In his place the Swede Frantz Pehr Oldenburg went, who died in

1774 in Madagascar.

Thunberg arrived in Java on the 18th of May and he left Java again on the 20th of June 1775.⁹ In Java the voyage to Japan was prepared. The Councillor-Extraordinary of India, J.C.M. Radermacher (1741–1783), was instrumental in this, and certainly the physician J.P. Hoffmann, who looked after Thunberg's financial interests in Batavia during his visit to Japan. He sold Japanese goods such as a dinner-set that Thunberg had shipped, but “This year, all Japanese wares are being sold in such abundance in public sales that they have sunk to ridiculously low prices”. Hoffmann sent commercial articles for Thunberg to Japan, namely ‘unicorn’, that is grated horn of the narwhal which was sold in Japan at great profit as an aphrodisiac.

Thunberg arrived in Japan on the 13th of August 1775. Initially he was confined to Dejima and could only study plants in the small garden of the Company on that artificial island. He also purchased plants from Japanese interpreters who visited Dejima. Only on 30 January 1776 did he obtain permission from the Japanese governor to botanize in the vicinity of Nagasaki.¹⁰ A second opportunity to collect around Nagasaki occurred in late July 1776, when he obtained a permit for three days¹¹. Thunberg had to pay excessively for these permits: “By special favour of the Japanese Governor, I was permitted to make several excursions around Nagasaki; when I say that for a single day, to collect plants with a big crowd of Japanese, I had to pay 16 or 18 “imperiales” [rijksdaalders, rix-dollars], you certainly do not believe me, when I say that during my stay of 15 months in Japan, I had to pay 1000 imperiales, you will believe me even less”.¹² The main occasion for Thunberg to collect plants was of course the journey of the Dutch delegation to the court at Edo (Tokyo), 4 March–29 June 1776.¹³ In the meantime the return ships had sailed already for Batavia in October 1775, Thunberg sent mounted herbarium specimens with

these ships to N.L. Burman in Amsterdam as well as some seeds for the Hortus Medicus and his "patrons".¹⁴ In the spring of 1776, when Thunberg was off to Iedo, a few Chinese junks left Nagasaki for Batavia. Usually the Chinese skippers would carry letters and parcels addressed to the Dutch government at Batavia. Probably Radermacher received his consignment of Japanese plants this way, and through Radermacher, Houttuyn. Thunberg used the next occasion to return with Dutch ships to Batavia, where he arrived on 4 January 1777.¹⁵ If a Chinese junk would have taken the Japanese herbarium of Houttuyn to Batavia, it could have been shipped with the return fleet of October–November 1776 that arrived in Holland in May–June 1777.¹⁶ In the other possibility, that Thunberg brought the herbarium with him to Batavia, he was just in time to send them with the last ships of this fleet that departed on 27 January and arrived in September–October 1777. With these ships Thunberg sent his Japanese material to N.L. Burman in Amsterdam. He announced the shipment in a letter dated 25 January 1777, two days before the ships sailed. The consignment consisted of: one box with mounted herbarium specimens for Burman, four small boxes with seeds for the Hortus and his patrons, one box with living trees, shrubs and perennials for the Hortus and the patrons. On the 3rd of December 1776, he sailed away. There had been some talk that Thunberg was to stay longer in Japan. Hoffmann wrote on 16 June 1776: "My friend Mister Duurkoop, who is soon to depart as Chief, has asked me to advise you to stay another year in Japan: would this not be profitable for you and useful for the Historia Naturalis?" Thunberg had other ideas and decided to return despite pressure from Duurkoop.¹⁷

The second stay in Java lasted from 4 January until 7 July, when Thunberg had a better opportunity to make a reconnaissance of the flora of Java. He collected there with Radermacher and with Von Wurmb. His *Florula javanica* was published in 1825.

Thunberg stayed in Ceylon from 21 August 1777 until 5 February 1778. Thunberg collected in several areas of Ceylon. He had a special interest in the cultivation of cinnamon and in the minerals of the island, on which he published.¹⁸ His *Florula ceilanica* was printed in 1825.

The second visit to South Africa was from 27 April until 15 May 1778. Thunberg only had time to visit some friends and made no further collection.

On 1 October 1778, Thunberg arrived in the Texel. Nicolaas Burman quickly sent him a welcoming letter and invited him to stay at his home "where we will live as brothers and spend the winter as pleasant as possible". He visited his friends and sponsors, and saw to his delight that several of his introductions flourished in their gardens.

In December and January, Thunberg visited England with letters of introduction to Banks from N.L. Burman. In Banks' library, he studied Kaempfer's drawings of Japanese plants. Forster presented him with duplicates from his voyage with Cook.

Thunberg arrived home in March 1779. His urge to travel was exhausted and he would never leave Sweden again. He accepted the professorship in Uppsala that had much earlier been offered him with an oration on the Japanese money system. The Swedish King donated to him part of the Royal Park, the present Botanic Garden of Uppsala.

Thunberg's observations and collections

Thunberg did what may be expected from an Eighteenth Century biologist: he collected plants and animals. His most important collections are preserved in Uppsala and in Stockholm. Outside Sweden, Thunberg material is found as well, his herbarium material in particular is amply distributed (H, LINN, BM, G, M, L).¹⁹ Thunberg's diaries show his interest in many other, not strictly biological matters. His treatise on Japanese money aroused much interest and it was soon translated into Dutch.²⁰ In Japan he also

made meteorological observations, which were published in the Proceedings of the Holland Society and later in the French edition of his journal.²¹ Thunberg used a thermometer with a calibrated scale of 112 degrees Fahrenheit, made by the Amsterdam instrument maker Prins. The most important aspect was the collecting of living plants and seeds. For this he was paid by his sponsors.

Burman wrote Thunberg that he would oblige the Hortus with living plants which are difficult to grow from seed such as *Geranium spinosum*, *G. flavum*, *Mesembryanthemum*, *Cactus* and *Aloe*. He also asked for bulbs and tuberous *Pelargonium*. The Commissioners of the Amsterdam Hortus emphatically desired “only plants, bulbs and seeds that are very rare and nothing else”, as Egbert de Vrij Temminck wrote on 20 August 1773 to Thunberg at the Cape. Other matters the Hortus did not wish to receive: “the sent dry birds, beetles etc. we will leave to the gentlemen Van de Poll, ten Hoven, Deutz and to both Professors Burman”. This admonition did not have any effect because on 23 November 1775 Temminck wrote again: “Please do not send for the Hortus Medicus to the Gentlemen Commissioners anything else but plants, bulbs and seeds, we make a collection of nothing else, so also not of a dry herbarium”. However, Thunberg continued sending herbarium specimens which the Hortus did not want; his Japanese herbarium was even returned to him by the Hortus. N.L. Burman wrote him on 22 February 1780: “The packet with Japanese plants has been taken in the autumn from the Hortus to deliver it to you, if there is among these or the Ceylonese anything in duplo, I remain, as agreed, highly recommended, because I can get nothing from the Hortus what grieves me deeply”. This seems to be in contradiction with the statement by Professor Willem Hendrik de Vriese (1806–1862) who wrote on the first of April 1835 to the Commissioners that an important dry collection of Japanese and Cape plants of Thunberg was present in

the Hortus.²² The letter contains a proposal to establish a herbarium in the Hortus. The nucleus was to be formed by two herbaria discovered by De Vriese in the Hortus, stored in wooden boxes from Amboina. They contained a ‘Burman’ herbarium from Ceylon and a Thunberg herbarium from the Cape and Japan. De Vriese’s request was received favourably in a reply dated 21 May 1835. De Vriese received money to curate this herbarium, the beginning of the institutional Herbarium of Amsterdam (AMD).²³ In his letter De Vriese mentioned that the Thunberg herbarium consisted of plants described in Thunberg’s Flora’s of Japan and the Cape, and that Thunberg had annotated the specimens himself. De Vriese claimed that the herbarium in Uppsala contained only ‘fragments’ [the Uppsala herbarium now contains ca 28,000 specimens] of Thunberg’s collections, thus implying the importance of the Amsterdam set.²⁴

Not all shipments from Thunberg arrived intact. In 1776 during transshipment in Batavia part went overboard and the crates arrived in Amsterdam nearly empty. When his home voyage was nearly completed Thunberg lost many of his living plants in a storm in the English Channel.

Of only few plants it is certain that they arrived as Thunberg’s introductions in the Hortus. There are no lists of species sent so that we are entirely dependent upon haphazard references. For instance, a note on a herbarium sheet in Uppsala of *Eucomis comosa* reads “cult. in H. Amstelodamensi e bulbo e Cap. allato per Th.” (grown in the Garden of Amsterdam from a bulb sent from the Cape of Good Hope by Thunberg). Houttuyn described the same species on the basis of a living plant in his own collection as *Asphodelus comosus*²⁵, but he knew the plant from the Hortus as well. The flowers from the Amsterdam Hortus, on the basis of which Houttuyn described the genus *Massonia*²⁶, originated from a plant sent by Thunberg. With certainty Thunberg introduced *Hydrangea macrophylla* as it is recorded in an annotated her-

barium sheet “e Japonia allatum coluit in H. Upsal. Th.” (brought from Japan, Thunberg grew it in the Garden of Uppsala), whether the Dutch received this plant is not known.²⁷ The Jardin du Roi in Paris received living plants from Thunberg through his connection with André Thouin. But these all froze to death in the winter of 1789–1790.²⁸

David ten Hoven (8 March 1724–27 June 1787), was a merchant who held several offices in the government of Amsterdam, and a brother-in-law of Temminck. He desired from Thunberg mainly “exotic trees to grow here for timber and carpentry wood”. In the dunes of Heemstede-Vogelenzang he mainly planted “*Pinus*, *Abies*, *Cupressus*, *Cedrus* and *Juniperus*” at his country-seat of ‘Woestduin’. On 6 Nov. 1775 Ten Hoven wrote to Thunberg that from the bag with seeds that had been opened in the Hortus, 118 species, of which three species of “*Pinus*” had already germinated.

Jan van de Poll Pietersz. (9 Sept. 1726–16 Aug. 1781) was another wealthy merchant in Amsterdam, at one time burgomaster of this city. He owned the country-seat of ‘Velseroog’ at Velsen and desired hardy flowering shrubs for ‘Velseroog’.²⁹

Jean Deutz (9 Dec. 1743–29 Jan. 1784) was a solicitor who held many offices in the government of Amsterdam. He was a director of the Society of Surinam. He owned the country-seat of ‘Roos-en-Beek’ at Velsen. His wishes were “dry plants and as many seeds as possible”. He required information on “l’usage économique” and on grasses. In November 1773, seeds had arrived of *Cycas caffra* and *Royena polyandra*.³⁰ *Eriocephalus* and other species had already started growing. *Gardenia* [= *Thunbergia*] had germinated massively.

In March 1780 seeds from Japan arrived. In October of that year a *Camellia* shrub from Ceylon had flowered, of which the Commissioner Six³¹ thought that it was a new species. Some herbarium specimens from ‘Roos-en-Beek’ are found in the herbarium De

Gorter (L), a few of them possibly represent Thunberg introductions.³²

Egbert Vry Temminck (22 Dec. 1706–27 June 1785), many times burgomaster of Amsterdam, director of the East and West India Companies, was a commissioner of the Hortus Medicus from 1766 until 1784. He owned the country seat of ‘Hout en Baan’ in Haarlem.

Thunberg honoured his patrons in several genera: *Deutzia*, *Hovenia* and *Polia*; *Burmania* L. 1753 already existed, *Temminckia* was published by W.H. de Vriese in 1851 for another Temminck. Burman reported in October 1784 “the *Aucuba* and *Cycas* which we received from you in the Hortus are growing perfectly though not flowering, these remind me frequently of you, it is a pity that the others did not grow better”.

Japanese and Cape introductions of Thunberg arrived in a commercial nursery too. The German botanist Jacob Friedrich Ehrhart visited the Netherlands in 1782 and saw them in the nursery of ‘Tulpenburg’ of the Utrecht nurseryman Zacharias Brakel.³³ However, the effective horticultural exploration of the flora of Japan was left to Franz Philipp von Siebold (1796–1866). Before Von Siebold sailed to Japan in Dutch service he wrote to the grand old man Thunberg in 1822, who answered with a letter of good advice.

The last active Dutch correspondent of Thunberg was N.L. Burman (1782–1826), son of Thunberg’s sponsor Professor Burman (1733–1793). Burman Jr. opened the correspondence on 22 Dec. 1820 with an explanation of the misery that had struck the Fatherland and the Burman family during French Rule, under which the family had been forced to sell their splendid library and herbaria.³⁴ Now that the situation was improving, Burman wished to resume study of botany. He was mainly interested in the genus *Protea* and asked Thunberg for literature; the Dutch booksellers did not sell botanical works any more. Botanical research in the Netherlands was at a low; only of

Reinwardt there were high expectations for the future. In zoology Temminck was active in Leiden, Thunberg was in contact with him. Burman obviously had good contacts with Reinwardt, because in 1820 he sent Thunberg seeds that Reinwardt had collected in Java. Burman had a country-seat at Nieuwersluis on the River Vecht.³⁵ Burman had good contacts in the Cape as well. Through his nephew Neethling and 'a naturalist' at the Cape, he offered Thunberg: a quagga at 50 rix-dollars, a brown hyaena ('strandwolf') for 50 rd and a giraffe for 400 rd. The quagga was never delivered. The animal possibly had already become too rare, or the 'untrustworthy naturalist' sold it to someone else at a better price. The female last specimen died on 12 August 1883 in the Artis Zoo and is preserved in the Zoological Museum Amsterdam.

Finally Burman would have liked to have published Thunberg's unpublished South African and Japanese plant drawings, where his father had failed. J.A. Schultes mentioned Thunberg's *Icones ineditae* in his preface to his edition of the *Flora capensis* (1823: 26). In a letter of 3 Oct. 1825, Burman offered 25 ducats and two handcoloured copies of the published book for Thunberg's unpublished Cape drawings. Thunberg must have agreed as Burman acknowledged their receipt and wrote that he would dedicate the publication to the Uppsala Academy of Sciences. No such publication is known, nor the present location of these drawings. Moreover, he offered to pay 100 Dutch guilders for 203 plates of Japanese plants, in order to publish them. The letter containing this offer of 17 June 1826 was the last one, as Burman died on 5 December of that year, probably of chest complaints, due to a neglected cough of which he had suffered for well over a year. These Cape and Japanese collections have never been published. The collection of 305 unpublished Japanese plant drawings in St Petersburg might include them.

Maarten Houttuyn

Houttuyn (1720–1798) was a physician in Amsterdam. He was a very productive author. His main work, the *Natuurlijke Historie*³⁶, is often erroneously attributed to Linnaeus, although Linnaeus' work³⁷ forms no more than the framework for Houttuyn's encyclopaedia. He described over 100 new plant species in his book, mainly from South Africa, Java, Japan and Ceylon. Those are precisely the areas where Thunberg collected. All his new species from Japan, and most from Java and Ceylon have been based on Thunberg's collections³⁸, but not those from South Africa. Houttuyn did not mention his source for Cape plants; he stated only that he bought them occasionally. As a possible source one could think of Jan Andries Auge (1711–ca. 1805),³⁹ a German who had been trained in botany in the Leiden Hortus under Boerhaave. Auge became gardener of the Company's Garden of Capetown. He often accompanied botanical expeditions of visiting botanists, also the first one of Thunberg. Houttuyn received material from Java, Japan and Ceylon through J.C.M. Radermacher in Java.

From Radermacher himself, Houttuyn received collections too. Among these was a box with tin-ores from Malacca, which he described repeatedly.⁴⁰ At the auction of Houttuyn's cabinets in 1789⁴¹, Van Marum bought this box for Teylers Museum,⁴² and it is still present in that collection.

Thunberg published *Houttuynia*: "Nomen imposui huic generi in honorem Botanic. merit. et Med. Doctor Domini Houttuyn, Hollandi".⁴³

De Hollandsche Maatschappij der Weetenschappen (The Holland Society of Sciences)

Many of Thunberg's Dutch connections were members of this Society. Father and son Burman since 1773, Baron von Wurmb since 1779, Houttuyn and Andreas Bonn since 1780. The directors were Deutz since 1778 and Radermacher since 1777; also

the governor of Ceylon, Iman Willem Falck, was director.⁴⁴ Jean Deutz proposed Thunberg as a member, appointment following in 1781.⁴⁵ Meanwhile the first contribution by Thunberg on his meteorological observations in Japan had been printed in the Proceedings.⁴⁶ Initially it was the intention of J.P. Hoffmann in Batavia to publish the article there, but he refrained from doing so and permitted Thunberg to publish it.⁴⁷ Deutz asked Thunberg for an article on palms, which in 1782 appeared in a Dutch translation by Houttuyn. It contains the valid publication of *Cycas revoluta*.⁴⁸

From 1794, Martinus van Marum (1750–1837) was the secretary of this Society, with whom Thunberg conducted a scientific correspondence⁴⁹. There was the usual exchange of publication.⁵⁰ Van Marum asked for them for the Holland Society and for Teylers Museum. Besides these, the main exchange was of stuffed animals; Van Marum received the skin of a *Rhea*. The private interests of Van Marum were served as well. He received seeds for his private botanic garden at 'Plantlust'. He was mainly interested in 'Nordic' plants and received seeds from the collections made by Erik Laxmann (1737–1796) in Mongolia and by Peter Simon Pallas (1747–1811) in Siberia. Van Marum offered to send seeds from the Hortus of Harderwijk, where Reinwardt was the Director. Later on, Reinwardt would become Director of the Natural History Cabinet of the King of Holland, Louis Napoleon, at 'Welgelegen' in Haarlem. Van Marum and Reinwardt were in close contact in Haarlem. Both were involved in the foundation of the Royal Institute, of which Thunberg would become a corresponding member.

De Maatschappij ter Bevordering van de Landbouw

(The Society for Advancement of Agriculture)

Deutz wrote in a letter of 9 October 1780 to Thunberg "in the next general meeting I will have the honour to propose you as a member [of the Holland

Society]" and that he intended to nominate him as a member of the Society for Advancement of Agriculture in Amsterdam [founded in 1776], "which has no more than 23 honorable members" [later this number would be fixed at 30]. In effect "Carel Frederik Thunberg, Lector Botanices in Uppsala" on 25 April 1781 became an honorary member, as well as the Harderwijk (later Utrecht) Professor Matthias van Geuns. Other members of this Society were Jean Deutz, Jan van de Poll Pietersz., Eduard Sandifort (Leiden, the only Dutch member of the Academy of Sciences in Uppsala, which was founded by Thunberg) and David de Gorter (Zutphen).

Het Zeeuwsch Genootschap der Weetenschaapen

(The Zealand Society of Sciences)

Houttuyn asked Thunberg if he cared for membership of the Zealand Society. This was obviously the case as Houttuyn⁵¹ sent him the certificate. Earlier, Thunberg's teacher Carl Linnaeus had been a member of the Zealand Society from its foundation in 1769, as well as his Stockholm colleague and pupil Peter Jonas Bergius (1730–1790). Thunberg did not publish in the Proceedings, but Houttuyn edited a few annotated translations.⁵² The letters from Secretary Van Doorn⁵³ to Thunberg contain nothing of importance. Van Doorn wrote him that the Society expected not more from its members than a contribution to the Proceedings once every seven years.

Het Bataviaasch Genootschap der Kunsten en Weetenschappen

(The Batavia Society of Arts and Sciences)

This Society was founded in 1778, when Thunberg was no longer in Java. As President Radermacher was the leading figure, but Frederik Baron von Wurmb played an important part as Secretary. The governors of the Cape of Good Hope, Van Plettenberg, and of Ceylon, Falck, were Directors. The physician J.P.

Hoffmann reported to Thunberg by letter of 27 June 1778 that the 'Academic Society' in Batavia was founded [24 April]. This was, "so to speak, a daughter of the Holland Society of Sciences".⁵⁴ Thunberg became a corresponding member of the Society around 1790. On 25 July 1780 Radermacher sent him the first two volumes of the Proceedings.

Radermacher was highly interested in Natural History. He published a *Naamlijst der planten*.⁵⁵ For this he solicited the help of Houttuyn in the insertion of the new genera described since Linnaeus' most recent work. Houttuyn himself found this problematic and consulted Thunberg.⁵⁶ Frederik von Wurmb mainly specialized on palms.⁵⁷ Radermacher saw the Society as a means to achieve his programme. As early as 1778 the Society offered a prize 'For the description of most medicinal plants, fruits and roots, in use here by the natives, confirmed with good proof; in order to prevent all uncertainties and harmful effects'. In 1782 this prize was offered again, but it was never explicitly contested for. On 1 September 1781, Radermacher asked Thunberg to send a botanist to serve the Society. This request was repeated on 10 December, after Von Wurmb had died on 5 December. The botanist for the Society would be appointed as an under-master, with good prospects for promotion. He would earn 200 golden ducats a year and receive 100 golden ducats as travel allowance. On the same day Radermacher instructed his solicitor Frans de Wilde, bookkeeper of the Company in Amsterdam, to assist and to pay the intended botanist. On 1 December 1782, he repeated his offer "If Mister Hornsted comes to India, I will look after him if he will commit himself to the Society." Claes Frederik Hornstedt (1758–1809) must have been on his way then, because on 10 Jan. 1783 Hornstedt wrote to Thunberg of his experiences at the Cape of Good Hope. On the 2nd of August of that year, Radermacher wrote to Thunberg that Hornstedt had been appointed as an assistant with a salary of 20 rix-dollars a month.

On 17 November, Radermacher sailed to Holland with the vessel 'Java', but he was murdered in a mutiny by the sailors in the Gulf of Bengal on 24 December 1783. In a postdated letter '– 1784 Gabo of Good Hope', he reported Thunberg to have conveyed the presidency of the Society to Director-General Adriaan Moens, who had promised to take care of Hornstedt. In Batavia Hornstedt lived in the house of the Society on the Grote Rivier (donated by Radermacher), and by then he earned 30 rix-dollars a month. In March 1784, this was raised to 40 rix-dollars, and because of his merits to the Society, he was appointed a member. Notwithstanding this, apparently it was not sufficient to withhold Hornstedt from his departure in August 1785. He returned via France and Greifswald to Sweden. In Greifswald he defended a thesis on the edible plants of Java, a subject similar to that of the prize offered by the Society.⁵⁸ Also he published a few zoological contributions on the East Indies. His journal was published posthumously.⁵⁹

H.J. Lebeck (?–1800), another pupil of Thunberg, worked for a short time in Java. He arrived in the autumn of 1798 as a tradesman, essayor and mint-master. In his free time, he was willing to do biological research, but he considered himself a novice and was afraid to describe already known species. He sent shells, hides, insects and plants from the surroundings of Batavia to Thunberg. About the Society, he wrote "Wiegman left behind 800,000 rix-dollars. This is his only merit, because as President of a learned society he made himself no fame and it is during his presidency that the Society here fell in complete decay. It seems unlikely that a second Radermacher will emerge."⁶⁰ Lebeck died on 12 June 1800 in Batavia.⁶¹

The only biologist who has worked for some longer time for the Society was the American Thomas Horsfield (1773–1859). In 1800 he visited Java for the first time, he returned in 1802 and from 1804 he was

assisted by the Society that put a draughtsman at his disposal.⁶² In 1819 he left Java for London, where from 1820 he was Keeper of the Museum of the East India Company. His manuscript (Checklist of trees and plants, that grow in the surroundings of Batavia, in Latin after the Linnaean system and most of them with their Malayan names, 6 March 1802) remained unpublished because of the difficult situation during the war with England.

The botany of Indonesia only acquired a firm basis again with the arrival of Reinwardt in 1817. He founded the Botanic Garden of Buitenzorg (Bogor) and restored the Batavia Society. Franz Philipp von Siebold became a member of the Society in 1822; he was to continue the work of Thunberg in Japan and develop it further.⁶³ From Reinwardt, Thunberg received Java material through N.L. Burman Jr.

Het Koninklijk Instituut van Wetenschappen (The Royal Dutch Institute of Sciences)

On 19 October 1809⁶⁴, Thunberg was appointed corresponding member of the Royal Institute, that had been founded on 4 May 1808 (the present Royal Dutch Academy of Sciences). It seems probable that Reinwardt and particularly Van Marum, both closely involved in the Royal Institute, have been instrumental in this appointment. On 29 July 1813, Thunberg was promoted to First Class associate member, so that he could justly call himself a member of the Amsterdam Academy on the title-page of *Plantarum japonicarum species novae* (Uppsala, 1824). However "From this man's literary production, the Class did not receive any special contributions".⁶⁵

Conclusions

Thunberg kept contacts with many Dutch scientists. Most of them were members of one or more learned societies. The contacts of Thunberg, however, originated mainly from personal connections. Members of the Holland Society were instrumental in

the organisation of Thunberg's voyage to the Orient, but the position of the Burmans and their connection with the Dutch East India Company was decisive in this matter. Thunberg contributed but little to the Proceedings and the collections of the Societies. The main purpose of membership was mutual augmentation of status. Only the Batavia Society received assistance from two of his pupils, Hornstedt and Lebeck. Thunberg's collections were of great importance to the cabinet and the *Natuurlijke Historie* of Maarten Houttuyn. Several private gardens around Haarlem owed plant material to him, such as 'Plantlust' of Van Marum. Thunberg's correspondence with Van Marum probably originated through the Holland Society. Van Marum possibly arranged Thunberg's membership of the Royal Institute.

Linnaeus' scientific career owed much to his Dutch connections. Thunberg's career was set off by his opportunity to travel to the Orient in Dutch service. However, after the French Rule, the Netherlands had lost its leading position. In Thunberg's later career they played only a minor part.

1. Mijnhardt W. W. 1970. Tot Heil van 't Menschdom. Culturele genootschappen in Nederland, 1750–1815. Amsterdam: Rodopi 1988; R. W. P. Visser, De Nederlandse geleerde genootschappen in de achttiende eeuw, Documentatieblad werkgroep 18e-eeuw 7: 7–18.

2. Wijnands D. O. and Heniger J. 1991. The origins of Clifford's herbarium. Bot. J. Linn. Soc. **106**: 129–146.

3. In Paris, Thunberg lived "chez monss Personnes, maitre couteillier, Rue St Jacques vis a vis l' Eglise de St Yves a Paris" (letter to N. L. Burman, 24 March 1771).

4. N. L. Burman to Thunberg, 30 May 1771. Unless stated otherwise, the cited correspondence is from the University Library Uppsala, Manuscript Department, 'Bref till Thunberg'. Part of the correspondence is published: D. O. Wijnands, The correspondence of Maarten Houttuyn to Carl Petter Thunberg. Proc. Kon. Ned. Akad. v. Wetensch. **39**: 77–95, 1990.

Among the Directors of the Chamber of Amsterdam were Thunberg's sponsors Temminck and Van de Poll. An appointment of Thunberg has not been found in the VOC-archives. In autumn 1771, as many surgeons as possible were engaged in view of the many sick on the outgoing fleet. Illustrative is the voyage of Thunberg on the vessel 'Schoonzicht'. Upon arrival in Capetown on 16 April 1772, there were 105 dead and 35 sick (ARA, VOC 4269, Journal of the Cape of Good Hope, 1 January–31 December 1772).

5. Municipal archives Amsterdam, Archief van de Commissie

van Toezicht over de Hortus Botanicus PA 626, inv. no. 2. The payments are:

– Nov. 1771: „Aan de tweede meester op ‘t schip Schoonsigt na de Caap, C.P. Thunberg volgens quitancie medegegeven om voor de Hortus enige gewassen en saden te zenden, f 100-0-0; – Aug. 1773: „Aan Capitein Popta, gaande na de Caap, voorde chirurg Tunberg sestig ducaten à f 5-5-0, f 315-0-0”; – Oct. 1774: „Aan den chirurgijn en botanicus Tunberg aan de Caap om een en andere rare saden aan de Hortus toe te zenden, f 199-10-0”;

– 1776: „Aan de botanicus Thunberg na Batavia gesonden per H. Elders met de Bovekerker Polder 50 ducaat à f 5-5-0 om bollen en saden voor de Hortus te besorgen, f 262-10-0”;

– 1776: „Aan de botanicus Thunberg na Batavia gesonden per Swan en Swart om saden en planten voor de Hortus te besorgen 50 ducaten à f 5-5-0, f 262-10-0”.

6. Wijnands D. O. 1987. The herbarium of M. Houttuyn and its relations to C.P. Thunberg and N.L. Burman. Abstracts XIV Intern. Bot. Cong., p. 444.

Thunberg's herbarium specimens from the Cape of Good Hope were seen on 16 December 1772 at the house of the Burmans by the Swedish traveler Jacob Jonas Björnståhl (J.J. Björnståhls reize door Europa en het oosten (5 vols; Utrecht/Amsterdam 1778–1784) 5: 435–436).

7. As often as were brought to them “some seeds, plants, crops, insects, or some other goods subject to decay and destined for the public gardens and cabinets, of this city as of other cities and towns”, the Chambers of the Company were authorised to give clearance instantly after due visitation. This procedure did only apply to public gardens and cabinets and not to private goods of this nature (ARA, VOC 181, Resolutions of Lords XVII, April 1772–April 1773, d.d. 23 April 1772).

8. Joachim Baron van Plettenberg was Governor of the Cape from 1774 until 1785. From the foundation onwards, he was a Director of the Batavia Society. In the period 1771–1774, he was acting governor. In 1771, Rijk Tulbagh had died, who had been Governor from 1751. Tulbagh was highly interested in Natural History. He commissioned many collections and shipped them to Europe. Linnaeus (*Mantissa altera*, 148, 223. 1771) honoured him in the genus *Tulbaghia* (Liliaceae). Earlier, Heister (Beschreibung eines neues Geschlechts 15. 1755) had published a genus *Tulbaghia*, now a synonym of *Agapanthus*.

9. In November 1773, Deutz transferred to him the advice of Banks and Solander, who had called there in 1770, to climb the “Alps” of Java.

10. ARA, Archives Dutch Factory Japan, inv. no. 186a, Journal 28.10.1775–22.11.1776, fol. 24.

11. ARA, Archives Dutch Factory Japan, inv. no. 186a, Journal 28.10.1775–22.11.1776, fol. 96.

12. Van Hall H. C. 1830. *Epistolae ineditae Caroli Linnaei*. p. 263. Groningen.

13. Van Hall, pp. 35–51. For his itinerary see W.T. Stearn, The name *Lilium japonicum* as used by Houttuyn and Thunberg. The Lily yearbook nr. 11: 101–108 (1947).

14. Van Hall, pp. 259–262, letter of 15 October 1775.

15. Thunberg C. P. 1794. *Voyages en Afrique et en Asie, principalement au Japon, pendant les années 1770–1779*. 4 vols. II: 158. Paris.

16. Bruijn J. R. & al. 1979. Dutch-Asiatic shipping in the 17th

and 18th Centuries. 2 vols. The Hague. II: 500–503.

17. Thunberg, *Voyages* 2: 359.

18. Thunberg C. P. 1784. Om öf Ceilons Mineralier ock aodla stenar. Kongl. Vet. Acad. Nya Handl. 5: 70–81.

19. Stafleu F. A. and Cowan R. S. 1986. Taxonomic literature. Reg. Veg. 115: 306–312.

20. Thunberg C. P. Intraodes-tal, omde mynt-sorter ... uti kejsaredömet Japan. Stockholm: Johan Georg Lange, 25 Aug. 1779.

Carl Pieter Thunberg, *Verhandelingen over de Japansche natie, haare zeeden, gebruiken en haare munten*. Uit het Sweedsch vertaald. Amsterdam: J.H. Schneider, 1780. (IV) + 32 + (1 tab.). Schneider, a bookseller in Amsterdam, correspond in 1779 with Thunberg on the publishing of this paper.

21. Thunberg, *Voyages* 2: 105–118.

22. Letter of W.H. de Vriese to Commissioners, 1 April 1835. Archives of the Hortus Medicus, Central Library of the Faculty of Biology, Anna's Hoeve, Amsterdam.

23. The Burman herbarium was identified as Burman's *Thesaurus Zeylanicus* herbarium by De Vriese, by means of the names and illustrations in Burman's work. This herbarium was collected by Paul Hermann on Ceylon (1672–1680). At present, sets of Hermann's collections are kept in the Rijksherbarium in Leiden, Gotha, the Institut de France in Paris, and the Natural History Museum in London.

24. What happened with the Burman and Thunberg herbaria after 1835, remains obscure. No such herbaria are preserved in Amsterdam at present. De Vriese left Amsterdam in 1848 for Leiden. In 1849 he complained on the fate of important Dutch herbaria (Flora 34: 470. 1851): “das Herbarium de beiden Burmann sei nach Paris gekommen; das von Thunberg sei spurlos verschwunden, eben so das von Hermann, das Linne zufällig bei einem Kaufman zu Kopenhagen fand; ebenso ging es mit dem Herbarium von Boerhaave”. It is surprisingly that De Vriese, who curated Thunberg's herbarium in 1835, had no idea where it was in 1849.

25. *Eucomis comosa* (Houtt.) Wehrh., based on *Asphodelus comosus* Houtt., Nat. hist. II.12: 336 t. 83. 1780 (= *Ornithogalum punctatum* Thunb., Prod. fl. cap. 62. 1794; *Eucomis punctata* L'Hérit., Sert. angl. 11 t. 18. 1788).

26. *Massonia depressa* Thunb. ex Houtt., Nat. hist. II.12: 424 t. 85 f.l. 1780. This is the generic type of *Massonia* and not *Massonia latifolia* L.f., Suppl. 27, 183 (1782), as listed in *Index Nominum Genericorum*.

27. Literature usually has it that *Hydrangea macrophylla* was introduced in 1788 in England; this must be corrected to 1776 in Sweden.

28. Letter of Thouin to Thunberg. Uppsala.

29. This country-seat has given way to the construction of the Noordzeekanaal (1865–1875).

A map of the surroundings of Haarlem with private gardens is reproduced in D.O. Wijnands, *Clematis florida* en C.P. Thunberg. *Dendroflora* 24: 3–7.

30. *Royena polyandra* was published by the younger Linnaeus, Suppl. 240. 1782. Thunberg used the name already in 1773. The current name is *Euclea polyandra* (L.f.) E. Mey.

31. J. Six van Hillegom was a Commissioner of the Amsterdam Hortus. He had a plant collection. Erroneously, he believed himself to be the first to flower a *Camellia* in Europe. A painting

of Six with his *Camellia* is in the collection Six, Amsterdam.
32. Van Ooststroom S. J. 1941. The herbarium of David de Gorter. *Nederlandsch Kruidkundig Archief* 51: 252–274.

33. J. Valckenier Suringar. Het bezoek van den botanicus Ehrhart aan ons land in 1782. *Nederlandsch Kruidkundig Archief* 36: 117–154. 1927; *Jaarboek van de Nederlandse Dendrologische Vereniging* 5: 91–104. 1927. See for Brakel: Kuylen, J., Oldenburger-Ebbers C. S. and Wijnands D. O. 1983. *Paradisus Batavus*. 189–190. Wageningen.

34. *Bibliotheca burmanniana*, Leiden 1800.

35. Nearby the country-seat 'Rupelmonde' of G.J. Beeldsnijder, who owned an important collection of Cape plants. See *Paradisus Batavus* 154–155.

36. M. Houttuyn, *Natuurlijke Historie*. 3 vols, 37 parts. Amsterdam 1761–1785. On the basis of Thunberg's Japanese collections he published: M. Houttuyn, *Beschryving van eenige Japanse visschen, and andere zeeschepzelen*. Verh. Holl. Maatsch. Weetensch. Haarlem 20.2: 311–350. 1782. Houttuyn's letters to Thunberg were published by Wijnands, *The letters of Maarten Houttuyn to Carl Petter Thunberg (1780–1790)*. Proc. Kon. Ned. Akad. Wetensch. 93: 77–95. 1990.

37. C. Linnaeus, *Systema vegetabilium* ed. 12 (1764), ed. 13 (1774). Stockholm.

38. Wijnands D. O. 1990. Correct author citation for the species described on material collected by Thunberg in Japan. *Thunbergia* 12: 1–48.

Wijnands D. O. and Heniger J. In prep. Houttuyn's herbarium in Geneva. *Candollea*.

39. Karsten M. C. 1951. The old Company's garden at the Cape and its Superintendents. Capetown. Auge arrived at the Cape in 1766 as a soldier on the vessel 'Gouverneur-Generaal' (ARA, VOC 11685, *Generale Monsterrol* 1777, vol. 2, fol. 16v–17). Wijnands D. O. 1992. Burman's *Prodromus Florae Capensis*. Bot. J. Linn. Soc. 109: 485–502.

40. Houttuyn M. 1785. *Beschryving van de Malakse tin-erts en derzelver mijnen*. *Verhandelingen Zeeuwisch Genootschap* 11: 383–389; also 1785 *Natuurlijke Historie* III, 5: 13, t.42 fol.2.

41. Houttuyn M. 1789. *Catalogus van eene uitmuntende verzameling van plantgewassen*. Amsterdam.

42. Wiechman A. and Palm L. C. (Eds.) 1987. *Martinus van Marum 1750–1837*. p. 247. Haarlem.

43. This name is conserved against *Houttuynia* Houtt., *Nat. hist.* II, 12: 448. 1780 (Iridaceae).

44. Falck was Governor of Ceylon and Director of the Batavia Society from its foundation. Deutz wrote a letter of introduction for Thunberg to Falck (23 Nov. 1773). Thunberg (*Nova Genera Plantarum* 1: 17. 1781) honoured Johan Peter Falck, Professor in St Petersburg, with the African genus *Falckia* (Convolvulaceae), see Wijnands and Meeuse 1990. The correct orthography and author citation of *Falckia*. *Bothalia* 20: 208.

45. The certificates of the Holland Society and of the Zealand Society are found in the collection 'Diplomata' of Thunberg in the University Library of Uppsala.

46. Thunberg C. P. 1780. *Thermometrische waarneemingen, in Japan gedaan, in the jaren 1775 en 1776*. Verh. Holl. Maatsch. Weetensch. Haarlem 19(3): 123–137.

47. Hoffmann to Thunberg, from Batavia. Maybe Hoffmann planned to publish them with the observations made in 1779 in Japan, and published these in the *Verhandelingen van het*

Bataviaasch Genootschap 2: 84–87. The French editor Langlès of Thunberg's journal included the observations of 1779 after those of Thunberg (*Voyages* 2: 119–123).

48. Thunberg C. P. 1782. *Beschryving van twee nieuwe soorten van palmboomachtige gewassen*. Verh. Holl. Maatsch. Weetensch. Haarlem 20(2): 419–434.

49. The correspondence of Thunberg with Secretary Van der Aa, Van Marum's predecessor, was not on scientific subjects.

50. The Library of Teylers Museum at Haarlem, which now includes that of the Holland Society, owns a few works by Thunberg:

Flora japonica, Leipzig 1784;

Icones plantarum japonicarum, 5 vols, Uppsala 1794, 1800, 1801, 1802, 1805;

Voyages en Afrique et en Asie, principalement au Japon, pendant les années 1770–1779. 2 vols. Paris 1794;

A collection of dissertations defended in Uppsala, under the professors Thunberg and Linnaeus jr.

None of these have annotations to prove that Thunberg sent them. Only volume 5 of the *Icones*, has on the title-page 'Dr Marum', possibly in Thunberg's hand. Thunberg wrote in 1793 that the *Icones* would be published in fascicles with 25 plates each, in reality there are 10 plates per installment.

Thunberg made use of Van Marum for distributing his publications: "In the same box I send you 6 copies of my *Prodromus Florae Capensis*, and 6 copies of my *Icones plantarum japonicarum*, which I beg you to sell to Botanists at two guilders each" (20 Oct. 1795). The mentioned *Prodromus* is lacking in Teylers Library. Teylers' collection of dissertations includes the ones mentioned in the correspondence: *Moraea*, *Restio*, *Ficus*, *Arbor toxicaria*.

Letters of Thunberg to Van Marum are preserved in the Van Marum archives of the Holland Society, d.d. 1793, 20 Oct. 1795, 12 Feb. 1796, 6 Dec. 1800, 13 July 1803 (this one and the following in French), 4 Sept. 1804, and 9 March 1805.

The Manuscript Department of the University Library Uppsala, includes among the letters to Thunberg the following from Van Marum: 14 May 1792, 15 June 1795, 13 June [1796], n.d., 25 May 1798, 1 June 1800, 6 June 1803, June 1804, 15 Jan. 1805, July 1805, July 1806. See also Lefebvre E. and de Bruijn J. G. (Eds.), *Martinus van Marum life and work* (Leiden 1976) VI: 347–349.

51. See note 29.*

52. *Aanmerkingen over de kaneel, op Ceylon gemaakt, door Cas. Petr. Thunberg; vertaald en met eenige aantekeningen vermeerderd*. *Verhandelingen Zeeuwisch Genootschap* 12.1: 296–312. 1786. After: Thunberg C. P. 1780. *Anmärkingar vid Canelen; gjorde pao Ceylon*. Kongl. Vetensk. Acad. Nya Handl. 1: 55–66 t. 5. Thunberg received some data for this article from Governor Falck through Deutz. Falck grew cinnamon trees in his botanic garden and had published on this in *Verhandelingen van de Hollandsche Maatschappij* 15: 278–286 (1774).

53. Van Doorn to Thunberg, Vlissingen ##.

54. H.A.M. Snelders, *Het Bataviaasch Genootschap van Kunsten en Wetenschappen in the periode 1778 tot 1816*. Documentatieblad werkgroep 18e-eeuw 41–42: 62–90 (1979).

55. J.C.M. Radermacher, *Naamlijst van planten, die gevonden worden op het eiland Java*. Batavia 1780–1782.

Radermacher gave the following survey of plant genera:

Linnaeus	1350
Houttuyn	19
Burman	7
Batavia Society	4
expected from Forskål	52
from Thunberg from the Cape	20
from Japan	75

From Rumphius 80 more genera could be extracted and from the Javanese plants another 74. On p. 73–88 Radermacher gave an interpretation of Rumphius' plants.

See for Radermacher: der Kinderen T. H., Levensschets van Mr. J.C.M. Radermacher, Bijlage X. 1878. in: Het Bataviaasch Genootschap der Kunsten en Weetenschappen, Gedenkboek 1778–1878, Batavia.

56. Houttuyn published his own version of the Linnaean system as *Systematische bladwijzer der planten in Natuurlijke historie* III.5 [not paginated, 164 pages from leaf Cc3] 1785. It followed Murray's 13th edition of *Systema vegetabilium*, "with addition of the newly described genera by Thunberg and others, sometimes amended and improved". This work has been generally overlooked.

57. Frederik von Wurmb, #.

58. Hornstedt, Claes Frederik (1758 Linköping – 1809 Helsinki)

Pupil of C.P. Thunberg, dissertation *Nova genera plantarum* volume 1, 24 Nov. 1781, where among others the genera *Deutzia*, *Hovenia*, *Polia*, *Wurmbia* and *Radermachia* have been published.

Herbarium collection in UPS-THUNB and SBT.

Epinym: *Hornstedtia* A.J. Retzius, *Observ. Bot.* 6: 18. 1791. Zingiberaceae.

Publications:

Beskrifning pa en ödla, funnen och insänd fran Java. [led af Vet. Societ. i Batavia]. Kongl. Vet. Acad. Nya Handl. 6: 130–133. 1785.

Fructus Javae esculenti eorumque usus. Greifswald 1786.

Beskrifning pa en ny orm fran Java. Kongl. Vet. Acad. Nya Handl. 8: 306–308 (1787).

Trigla rubicunda, en oken fisk fran Amboina. Kongl. Vet. Acad. Nya Handl. 9: 49–51 (1788).

Anteckningar under en resa till Ostindien, aren 1782–1786. Helsinki 1888.

See for Hornstedt: van Steenis-Kruseman M. J. 1950. *Cyclopedia of Collectors. Flora Malesiana* 1: 242–243.

59. The next visiting botanist who worked for the Society was Francisco Noroña (?–1787). Johan Hooyman (?–1789, since 1764 Lutheran minister in Batavia) reported to Thunberg on 5 May 1786 from Batavia that Franciscus a Noronha from Manila had arrived, "unusually skilled in natural history, above all in botany. He supervised the Museum of the Society. Collected rarities from Japan". Noroña collected in 1786 and 1787 in Java. He published in the Proceedings of the Society, but his most important work, a series of plant drawings, remained unpublished (see C.G.G.J. van Steenis & M.J. van Steenis-Kruseman, The plates of Javanese plants of Francisco Noroña with a revised evaluation of his new generic names. *Essays in biohistory. Regnum Vegetabile* 71: 353–380. 1970.) After a dispute Noroña left Java in 1787 and he died in Mauritius.

60. Letter of 15 April 1800, from Batavia. Jan Hendrik Wiegman was since 1789 Director and since 1794 President of the Society.

61. A pupil of Thunberg as is recorded in a letter d.d. 18-12-1794 from Stockholm (in German), undated, congratulations with appointment as Professor in Uppsala. Other letters from Lebeck to Thunberg show his itinerary:

22-1-1795, Stockholm

23-3-1796, Cape of Good Hope

24-2-1797, Colombo

10-1-1798, Calcutta

30-8-1798, Tranquebar

Collection in UPS-THUNB, such as:

Pteris nummularis Java, *Adiantum pedatum*, *Polypodium lycopodioides*, *Pleiopeltis thunbergiana*.

Lebeck was honoured in the genus *Lebeckia* Thunberg, *Nova Gen.* 139. 1800. Papilionaceae.

62. Van Steenis-Kruseman M. J. 1950. *Cyclopedia of Collectors. Flora Malesiana* 1: 243–244.

63. K. Vos, Assignment Japan. Den Haag 1989.

64. Card index of members of the K.N.A.W., kind communication from Mrs. I. van Klaveren.

65. Necrologies of Thunberg published by J. Teyssèdre l'Ange in *Verslag van de openbare Vergadering der eerste klasse van het Kon. Ned. Inst. v. Wet.* 1829: 18–19 and by H.C. Boon van der Mesch in *Klasse I Verslag* 1829: 10.